

COMMUNICATION ON AN ANTIQUE STONE HAND-HAMMER. BY F. PEALE.*

IN a late work, entitled "Geological Evidences of the Antiquity of Man," by Mr. Lyell, page 184, there is a description, illustrated by a wood-cut, of a cave situated on the side of a hill near Aurignac, department of the Haute Garonne, France; with a description of the bones of various animals found therein, associated with the works of man, as well as remains of his osseous structure.

Among the articles was one thus described by him: "Outside the entrance was found a stone of a circular form, flattened on two sides, with a central depression, composed of a tough rock, which does not belong to that region of the Pyrenees. This instrument is supposed by the Danish antiquarians to have been used for removing by skilful blows the edges of flint knives, the fingers and thumb being placed in the opposite depressions during the operation."

A similar instrument was lately added by myself to the cabinet of the Society as a "*hand-hammer*" (a drawing of which accompanies this communication). See Plate vii, Fig. 1.

This instrument is submitted to the personal inspection of the members. It will be observed that its entire correspondence with the description by Mr. Lyell of the specimen found near the cave at Aurignac, France, is so perfect, that it might, without explanation or exception, have been applied to the specimen before you, which was found in Monroe County, Pennsylvania.

This specimen is also interesting from the evidence it exhibits of the process of "*pecking*" (as it was called in a communication made to the Society in June, 1861), to form the cavities for the reception of the thumb on the one side, and the finger on the other. It also bears the mark of its use upon silicious minerals at each extremity; and it may, with little risk of error, be supposed to have been used in fashioning the flint arrow-heads of the *Stone Age* on the spot where it was found.

These implements are not rare in this country. A number are contained in my cabinet, and many specimens have been sent abroad for foreign exchange; but, as they present to an unaccustomed eye little difference from an ordinary pebble, it is only lately that they have attracted the attention of collectors; yet the remarks of Mr. Lyell

* Read April 15, 1864.

give evidence that they have not escaped the observation of those close and learned investigators, the archæologists of Denmark.

These implements, as far as my observation extends, have been hitherto entirely neglected in this country; but that is not so much a matter of wonder, when we know that the arrow and spear heads, so frequently found, are generally regarded as relics only, or the poor weapons, of the despised and degraded Indians, who formerly roamed in savage independence over these their hunting-grounds, with no thought of their ethnological relations or bearing on the history of the human race, and are therefore held in little esteem.

But may we not, without presumption, hazard a few remarks on a most important deduction to be drawn from the facts now being developed from examinations in nearly every part of the world? The close, nay exact similarity, of all these implements, derived as they are from regions far apart in space, in various climates, and, more singular still, from periods so remote from each other as to carry up archæology into the domain of geology; the implements of the former being so imbedded with the *debris* of the latter, that to assign a determinate age to either is probably beyond the reach of human investigation. Entirely prehistoric in their early associations, we find them, together with the bones of the great pachyderms and many other extinct animals, embedded in diluvium, in the earth and stalagmites of caves; and thence we descend from the era when these extinct monsters, the mammoth, the elephant, and the rhinoceros, and numerous rapacious beasts, held coeval possession with man of the river-banks of all climes down to the times which witness the same rude arts of the stone age practised by savages on this and it may be other continents, simultaneously with the arts of the highest civilization; when the instrumentality of the plough, the ship, and the factory furnish all that man's necessity calls for, or his most refined existence seems to need.

During all this interval man obeyed the same instinctive impulses. Even now we take a pebble (no better tool being at hand) to open a spiny chestnut burr, or to crack the shell of a nut. A savage, with no metal to aid him, makes of this pebble a more convenient tool, by pecking, with a still harder fragment of stone, cavities for his fingers; and, in a further advance, cuts a groove around it, in which he binds a *withe* handle, and then grinds its extremity to an edge, thus making the tools which serve all his limited wants, until more enlightened civilization teaches the use of metal.

Now does not all this indicate the UNITY OF HIS ORIGIN? He

naturally and inevitably follows the same course to supply his wants. He chips the flint and silicious minerals to form his spear and arrow-heads; he grinds the various stones to form his *chisels* and *axes*; he moulds the plastic clay to form his cooking utensils; and last, though not least, his aspirations for futurity indicate an innate consciousness of that great and good first cause, the Almighty hand, which formed him of the dust of the earth, and placed him in a beautiful garden, where he might have dwelt forever, if he had not fallen, by his own free will, to roam the earth,—to sink by ignorance and vice, alas! in too many cases, to that state in which STOCKS and STONES were or are his only guides or means,—the one for direction, the other for subsistence.

Stated Meeting, July 15, 1864.

Present, five members.

Mr. CHASE in the Chair.

Letters of acknowledgment were received from the Royal Society, Göttingen, January, 1864; the American Oriental Society, Boston, May, 1864, and the Lyceum of N. H., New York, March 17th, 1864.

A letter of envoi was received from the Société de Physique et d'Histoire Naturelle de Genève, March 1st, expressing a wish for full and regular exchanges, which, on motion of Mr. Fraley, was so ordered.

Letters with photographic likenesses of the authors for the Album were received from Jared Sparks, of Cambridge, Mass., May 28th, and Prof. Zantedeschi, of Padua. Mr. James presented a photograph, also, of Asa Gray, of Cambridge, Mass.

A letter to the Librarian was read from W. L. Nicholson, Esq., Topographer to the Post Office Department, correcting an error in the account of the deficiencies at Washington in the matter of United States county maps, given on page 352 of the Proceedings. Mr. Nicholson has a nearly com-